

a burner tube connected to said inlet end of said radiant heating tube;

a housing defining an air tight compartment connected to said burner tube;

a blower for continually forcing air into said air tight compartment;

a burner [operatively connected to said inlet end of said radiant heating tube] at least partially disposed in said burner tube, said burner having an inlet end to receive air and fuel, means for mixing air and fuel, and an exit end for emitting the air/fuel mixture for combustion closely adjacent thereto; and

single fuel means disposed in said air tight compartment and operatively connected to said inlet end of said burner for providing regulation of fuel to said burner at a plurality of predetermined pressures for demand heating, whereby fuel and air is mixed and burned by said burner to heat said radiant heating tube and exhaust gases exit said exhaust end; and

temperature means connected to said fuel means for triggering said predetermined pressures at a plurality of temperature settings.

Claim 4, line 2, cancel "3" and insert therefor --1--.

47. (AMENDED) A demand radiant heating system [as set forth in claim 6] comprising:

an elongated radiant heating tube having an inlet end and an exhaust end;

a burner operatively connected to said inlet end of said radiant heating tube, said burner having an inlet end, an outlet end, and a venturi shaped tube portion interconnecting said inlet end and said outlet end;

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fuel means operatively connected to said burner for providing fuel to said burner at a plurality of predetermined pressures for demand heating, whereby fuel and air is mixed and burned by said burner to heat said radiant heating tube and exhaust gases exit said exhaust end;

wherein said inlet end and said outlet end of said burner each have a plurality of openings to allow air and fuel to pass therethrough.

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8. (AMENDED) A demand radiant heating system [as set forth in claim 6] comprising:

an elongated radiant heating tube having an inlet end and an exhaust end;

a burner operatively connected to said inlet end of said radiant heating tube, said burner having an inlet end, an outlet end, and a venturi shaped tube portion interconnecting said inlet end and said outlet end;

fuel means operatively connected to said burner for providing fuel to said burner at a plurality of predetermined pressures for demand heating, whereby fuel and air is mixed and

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burned by said burner to heat said radiant heating tube and exhaust gases exit said exhaust end; and

wherein said inlet end and said outlet end of said burner each have a plurality of vanes spaced circumferentially thereabout to swirl air passing thereby.

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81. (AMENDED) A demand radiant heating system comprising:

an elongated radiant heating tube having an inlet end and an exhaust end;

a burner tube connected to said inlet end of said radiant heating tube;

a housing defining an air tight compartment connected to said burner tube;

a blower for continually forcing air into said air tight compartment;

a burner at least partially disposed in said burner tube, said burner having an inlet end to receive air and fuel, means for mixing air and fuel, and an exit end for emitting the air/fuel mixture for combustion closely adjacent thereto;

a single fuel regulator disposed in said air tight compartment and operatively connected to said burner for providing regulation of fuel to said burner at a low fuel pressure for low demand heating and a high fuel pressure for high demand heating, whereby fuel and air is mixed and burned by said burner to heat

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said radiant heating tube and exhaust gases exit said exhaust end;
and

temperature means connected to said fuel regulator for
triggering said low fuel pressure and said high fuel pressures at
a plurality of temperature settings.

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Claim 12, line 2, cancel "including" and insert therefor
--wherein said temperature means comprises--.

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*10*₁₄. (AMENDED) A demand radiant heating system [as set
forth in claim 13] comprising:

an elongated radiant heating tube having an inlet end and
an exhaust end;

a burner tube connected to said inlet end of said radiant
heating tube;

a burner at least partially disposed in said burner tube;
a fuel regulator operatively connected to said burner for
providing fuel to said burner at a low fuel pressure for low demand
heating and a high fuel pressure for high demand heating, whereby
fuel and air is mixed and burned by said burner to heat said
radiant heating tube and exhaust gases exit said exhaust end;

said burner having an inlet end, an outlet end, and a
venturi shaped tube portion interconnecting said inlet end and said
outlet end; and

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wherein said inlet end and said outlet end of said burner
each have a plurality of openings to allow air and fuel to pass
therethrough.

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15. (AMENDED) A demand radiant heating system [as set
forth in claim 13] comprising:

an elongated radiant heating tube having an inlet end and
an exhaust end;

a burner tube connected to said inlet end of said radiant
heating tube;

a burner at least partially disposed in said burner tube;
a fuel regulator operatively connected to said burner for
providing fuel to said burner at a low fuel pressure for low demand
heating and a high fuel pressure for high demand heating, whereby
fuel and air is mixed and burned by said burner to heat said
radiant heating tube and exhaust gases exit said exhaust end;

said burner having an inlet end, an outlet end, and a
venturi shaped tube portion interconnecting said inlet end and said
outlet end; and

wherein said inlet end and said outlet end of said burner
each have a plurality of vanes spaced circumferentially thereabout
to swirl air passing thereby.

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18. (AMENDED) A demand radiant heating system
comprising:

an elongated radiant heating tube having an inlet end and an exhaust end;

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a burner tube connected to said inlet end of said radiant heating tube;

a housing defining an air tight compartment connected to said burner tube;

a blower for continually forcing air into said air tight compartment;

a burner at least partially disposed in said burner tube, said burner having an inlet end to receive air and fuel, means for mixing air and fuel, and an exit end for emitting the air/fuel mixture for combustion closely adjacent thereto;

a single fuel regulator disposed in said air tight compartment and operatively connected to said burner for providing dual regulation of fuel to said burner at a low fuel pressure for low demand heating and a high fuel pressure for high demand heating;

a two-stage thermostat connected to said fuel [regulation] regulator and having a low demand temperature setting for triggering said low fuel pressure and a high demand temperature setting for triggering said high fuel pressure; and

whereby fuel and air is mixed and burned by said burner to [heating] heat said radiant heating tube and exhaust gases exit said exhaust end.